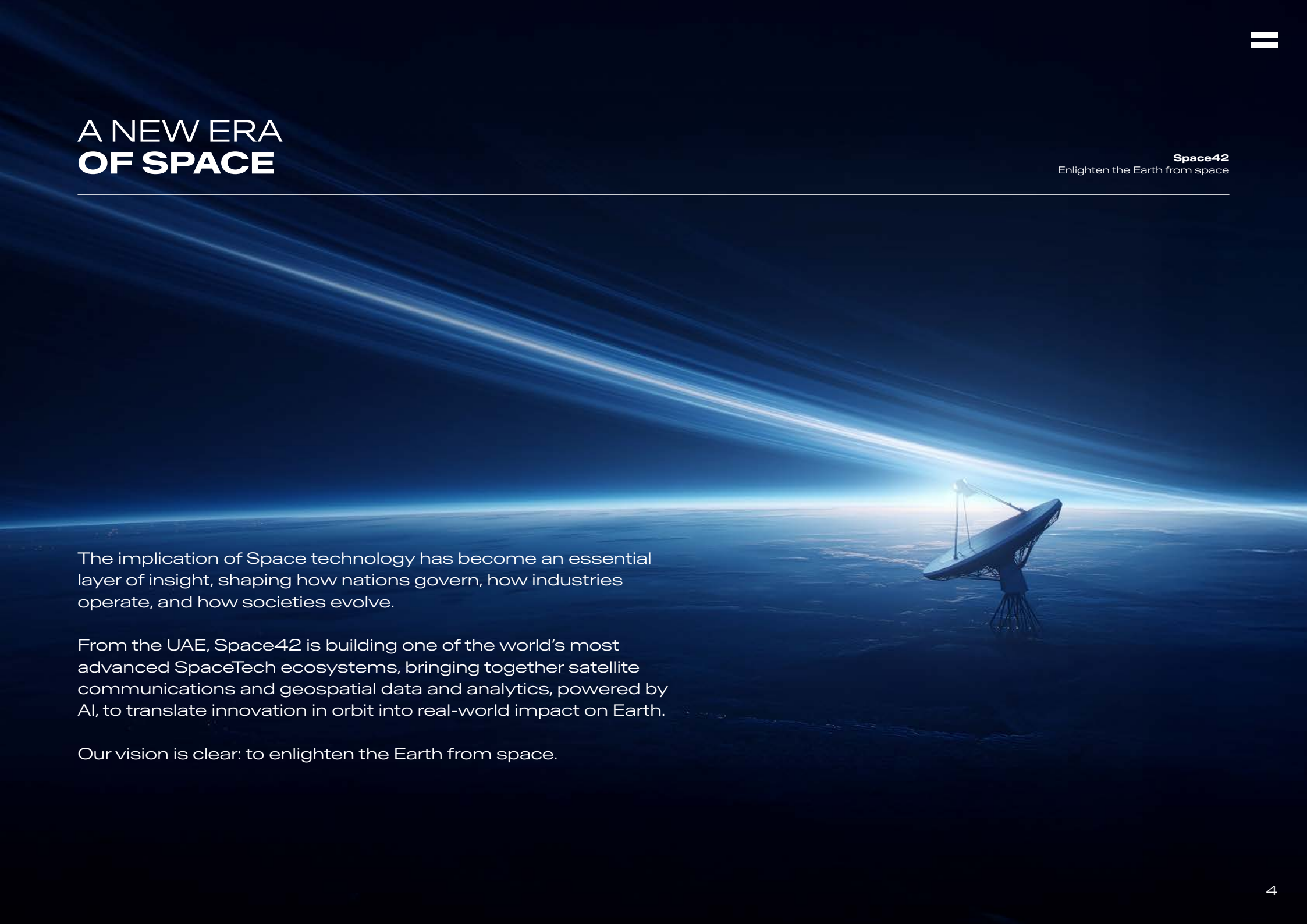

SPACE42
BEYOND
HORIZONS
FROM ORBIT TO IMPACT

01

SPACE42

ENLIGHTEN THE
EARTH FROM SPACE

A NEW ERA **OF SPACE**



The implication of Space technology has become an essential layer of insight, shaping how nations govern, how industries operate, and how societies evolve.

From the UAE, Space42 is building one of the world's most advanced SpaceTech ecosystems, bringing together satellite communications and geospatial data and analytics, powered by AI, to translate innovation in orbit into real-world impact on Earth.

Our vision is clear: to enlighten the Earth from space.

OUR **STORY**

Space42 is the UAE-based AI-powered SpaceTech company that integrates satellite communications, geospatial data, analytics, and AI capabilities.

Space42 brings together satellites, data platforms, AI, and secure connectivity into a single, seamless system. This turns complexity into clarity, and clarity into impact.

With a satellite and data footprint reaching more than 80% of the world's population across 150+ countries, Space42 delivers connectivity, insight, and resilience at a planetary scale.

80%

Of the world's population within our satellite and data reach

150+

Countries

SPACE42 IS GUIDED **BY FOUR STRATEGIC PILLARS**

At Space42, our strategy is anchored on four strategic pillars which guide every decision we make, from the satellites we build to the AI platforms we launch, ensuring a clear path from vision to measurable impact.

Preferred partner for premium geospatial data

Build tier-1 sovereign multi-sensor Earth observation assets and capabilities

Global leader in geospatial intelligence AI platform and services

Deliver actionable insights to global customers

Global NTN leadership

Lead the non-terrestrial network (NTN) revolution with Internet of Things (IoT) and Direct-to-Device (D2D)

Trusted leader in secure connectivity

Provide multi-path critical connectivity solutions

Sectorial priority

Autonomous mobility

KEY INITIATIVES

Preferred partner for premium geospatial data

Build a global Synthetic Aperture Radar (SAR) constellation while developing local SAR capabilities and accelerate SAR commercialization

Develop end-to-end HAPS proposition and commercialize solutions

Develop sovereign optical satellite program integrating advanced optical technology within local ecosystem

Global leader in geospatial intelligence AI platform and services

Collaborate with leading technology partners to develop cutting-edge geospatial data and insight solutions with global reach

Develop advanced geospatial analytical products tailored for distinct sector needs, with option for white-labelling and on-premise deployment

Continue to develop Digital Twin platforms and integrate with GIQ and IoT to enable smarter and more real-time decision-making

Global NTN leadership

Develop satellite constellation to provide Direct-to-Device (D2D connectivity to serve the smartphone and IoT markets

Augment our IoT value proposition leveraging Thuraya4- cutting-edge technology and future D2D connectivity offering

Trusted leader in secure connectivity

Provide bundled secured capacity over GEO to the UAE government through procurement of Al Yah 4 and Al Yah 5

Develop a low-latency sovereign offering to provide secure communication

GUIDED BY
FIVE PRINCIPLES

1

Programmatic growth
Prioritize clearly defined growth programs that bring incremental and recurring value

2

Sustainable differentiation
Pursue strategies where we can sustain a distinct advantage versus existing and new players

3

Capabilities-based
Capitalize on evolutionary core capabilities, and invest in new capability foundations that meet our principles

4

Scalability
Unlock opportunities and business models which can be materially scaled and are not constrained by geography, customer segment or sector.

5

Strategic financial stewardship
Focused on disciplined financial management, prioritizing the use of cash and debt to achieve our strategic objectives

ONE ECOSYSTEM
MANY HORIZONS

Satellite Communications
- GEO satellites
- LEO satellites
- D2D connectivity
- IoT networks
- Secure communications

Earth Observation
- SAR constellation
- Optical imaging
- Multi-sensor platforms
- HAPS

Geospatial Data and Insight
- GIQ platform
- AI analytics
- Digital twins
- Predictive insight
- HAPS
- Autonomous mobility

02

STRATEGIC PROGRAMS
ADVANCING OUR PILLARS

FLAGSHIP PROGRAMS AS **ENGINES OF IMPACT**

Strategic programs
advancing our pillars

Together, these programs demonstrate how Space42 connects observation, data, analytics, and connectivity into a single operational system.

Preferred partner for premium geospatial data

Foresight constellation

A next-generation SAR satellite constellation delivering persistent, all-weather Earth observation to power national security, infrastructure monitoring, and environmental insight

Global leader in geospatial intelligence AI platform and services

GIQ

Satellite-enabled service platform, powering real-time data collection and transforming Earth observation data into actionable insights through AI-driven analytics and interactive visualization

Map Africa initiative

A continental-scale initiative to create Africa's first living digital map, providing the geospatial foundation for economic development, infrastructure planning, and smarter decision-making

Trusted leader in secure connectivity

Thuraya-4 next-generation satellite connectivity

Next-generation satellite, delivering reliable connectivity across regions and use cases. Thuraya-4 supports mobility, mission-critical communications, and digital inclusion

Al Yah 4 and Al Yah 5

Two advanced sovereign communication satellites with best-in-class technology. They will provide secure, resilient, high-capacity connectivity for the UAE government and strategic national missions

Global NTN leadership

Equatys

Open, interoperable Non-Terrestrial Network (NTN), seamlessly extending terrestrial connectivity to standard smartphones and IoT devices via satellite; no hardware modification required

Sectorial priority

Autonomous mobility venture with A2Z

A strategic venture advancing full-stack autonomous mobility systems that integrate AI, geospatial analytics, and real-world operations to transform transport and infrastructure

03

WHERE SPACE42
DELIVERS IMPACT

GOVERNMENTS AND **NATIONAL SYSTEMS**

Strengthening sovereign capability through **space infrastructure, intelligent systems, and Earth observation**

Governments help protect borders through managing critical infrastructure, responding to emergencies, and planning long-term national development.

At a time when national security, environmental pressures, and economic priorities are increasingly interconnected, governments require trusted, sovereign access to data, connectivity, and infrastructure that operates beyond the limits of terrestrial networks.

By combining secure communications with advanced Earth observation and geospatial insight, Space42 enables continuous visibility, informed decision-making, and coordinated action across national systems.

GOVERNMENTS AND **NATIONAL SYSTEMS**

Space42 brings together satellite communications, Earth observation, and AI-powered geospatial data and insight, into a single integrated platform designed to support national capabilities. Space42 enables governments to monitor territory, protect critical infrastructure, and maintain secure communications across their entire domain.

This integrated approach supports a wide range of national systems, including:

- Border and maritime domain awareness
- Disaster response and environmental monitoring
- National infrastructure protection
- Urban planning and resource management
- Secure government communications

By combining real-time connectivity with high-resolution observation and AI-driven analytics, Space42 enables governments to move from fragmented systems toward a unified national capability.

The impact

The result is a stronger, more resilient national infrastructure. Governments gain the ability to see, understand, and respond to events across their territory in near real time, strengthening sovereignty and improving coordination between agencies responsible for national security, public safety, and economic planning.

With Space42 as a trusted partner, nations can develop long-term sovereign capability through space infrastructure, ensuring that critical communications, data, and insights remain secure, reliable, and under national control.

TELECOMMUNICATIONS **SECTOR**

Extending network reach through **integrated satellite and terrestrial connectivity**

Telecommunications providers face increasing pressure to expand coverage, improve network resilience, and deliver new services in markets where terrestrial infrastructure alone cannot meet demand.

Mobile operators are now preparing for the next evolution of connectivity, where satellite and terrestrial networks operate seamlessly together to support direct-to-device services, IoT connectivity, and truly global coverage.

TELECOMUNICATIONS **SECTOR**

Where Space42
delivers impact

To succeed, telecom providers require infrastructure partners that can extend their networks beyond terrestrial boundaries while maintaining reliability, interoperability, and commercial scalability.

The Space42 capability

Space42 enables telecommunications operators to expand their networks into space through an integrated infrastructure, combining satellite connectivity, global coverage, and standards-based network integration.

Through its multi-orbit architecture, Space42 provides resilient communications capacity that complements terrestrial mobile networks, allowing operators to extend coverage across underserved regions, mobility environments, and remote infrastructure.

Our platform supports a range of telecommunications capabilities, including:

- Satellite backhaul for remote network expansion
- Direct-to-device connectivity for smartphones and IoT
- Resilient communications for critical infrastructure
- Land, sea and air connectivity
- Large-scale IoT networks beyond terrestrial reach

The impact

With Space42 as a trusted infrastructure partner, telecommunications providers can transform the reach and resilience of their networks.

ENERGY **SECTOR**

Strengthening operational resilience across **critical energy infrastructure**

Energy operations span some of the most complex and remote environments on Earth. Offshore platforms, pipelines, refineries, and exploration sites, operate across vast territories where terrestrial connectivity is limited, and real-time visibility is critical. To operate effectively at this scale, energy operators require trusted infrastructure that provides continuous connectivity, reliable monitoring, and intelligent insights across their entire operational landscape.

ENERGY **SECTOR**

The Space42 capability

Space42 supports the energy sector through an integrated service offering, combining satellite connectivity, Earth observation, and AI-driven geospatial insight to deliver persistent awareness and resilient communications across the energy sector.

Through its multi-orbit satellite architecture and geospatial insight platforms, Space42 enables operators to maintain visibility and connectivity across offshore, remote, and cross-border energy operations.

Space42 provides energy operators with the tools to monitor, manage, and protect their assets from space:

- Secure connectivity for offshore platforms and remote facilities
- Pipeline and infrastructure monitoring across large territories
- Environmental and maritime monitoring around energy assets
- Real-time operational intelligence for exploration and production
- Resilient communications for critical energy infrastructure

The impact

With Space42 as a trusted partner, energy companies gain the ability to operate with greater awareness, resilience, and operational efficiency.

MARITIME **SECTOR**

Strengthening connectivity and awareness **across global maritime operations**

The maritime domain underpins global trade, energy supply, and national security.

Maritime operators must navigate complex challenges, from ensuring crew safety and maintaining operational communications to monitoring maritime traffic, protecting critical infrastructure, and responding to environmental or security incidents at sea.

MARITIME **SECTOR**

Where Space42
delivers impact

In an environment where visibility and connectivity are critical, maritime organisations require trusted partners capable of delivering continuous communications, real-time insight, and global operational awareness across the world's oceans.

The Space42 capability

Space42 supports maritime operations through an integrated ecosystem, combining satellite connectivity, Earth observation, and AI-driven geospatial insight to deliver reliable communications and persistent maritime awareness.

This integrated capability supports a wide range of maritime applications, including:

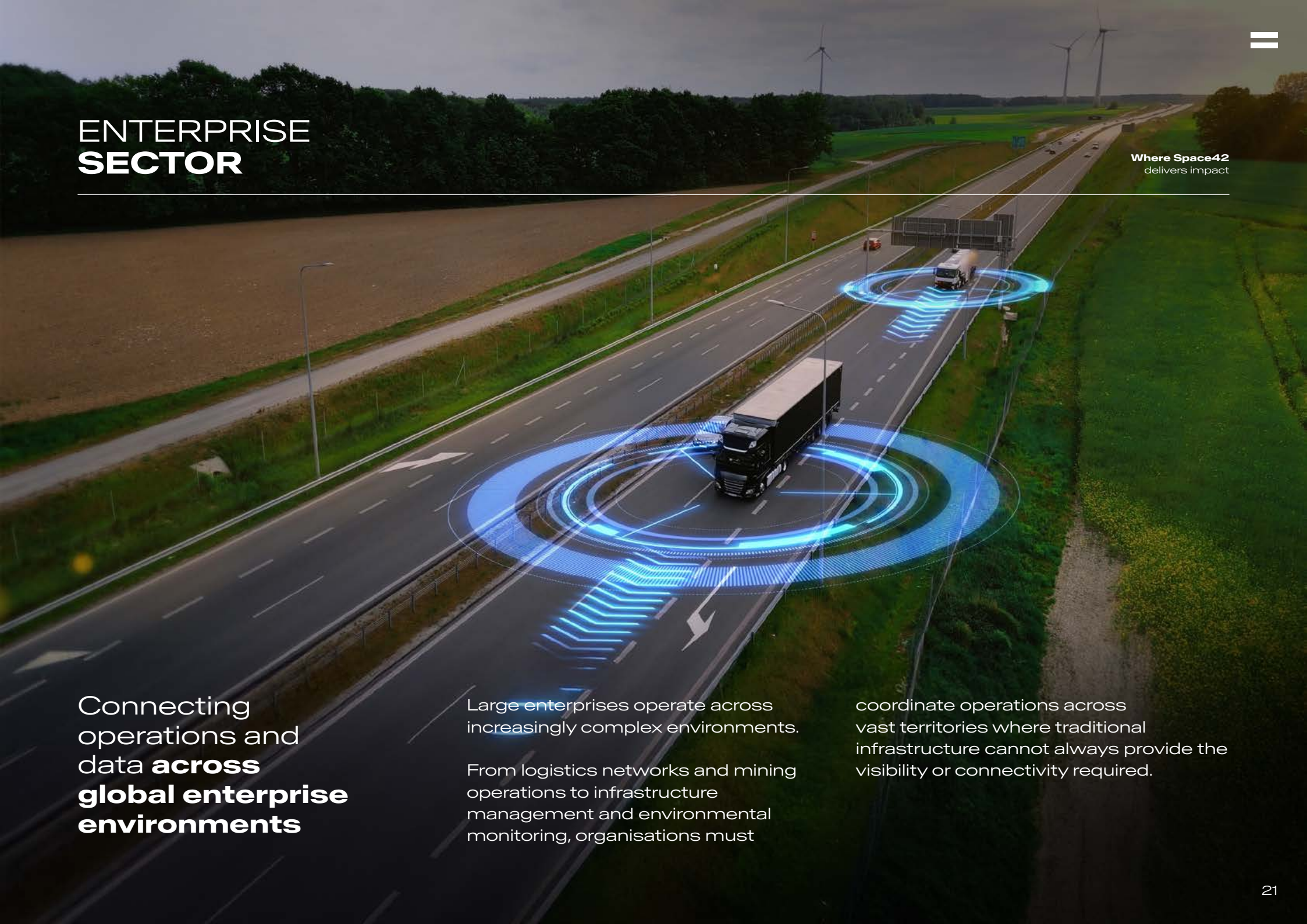
- Reliable satellite connectivity for vessels and offshore operation
- Maritime domain awareness across coastal and international waters
- Monitoring of shipping routes, ports, and offshore infrastructure
- Environmental monitoring and incident response at sea
- Secure communications for maritime safety and security operations

The impact

With Space42 as a trusted infrastructure partner, maritime operators gain the ability to operate with greater confidence, safety, and efficiency across global shipping routes.

Vessels remain connected, ports gain improved visibility over maritime activity, and authorities can monitor and respond to events across their maritime domain in near real time.

ENTERPRISE **SECTOR**



Connecting operations and data **across global enterprise environments**

Large enterprises operate across increasingly complex environments.

From logistics networks and mining operations to infrastructure management and environmental monitoring, organisations must coordinate operations across vast territories where traditional infrastructure cannot always provide the visibility or connectivity required.

ENTERPRISE **SECTOR**

Where Space42
delivers impact

Secure connectivity and Earth observation enable enterprises to stay connected beyond terrestrial limits, maintain real-time visibility over assets and operations, and act faster when conditions change.

The Space42 capability

Through its multi-orbit satellite architecture and advanced geospatial insight platforms, Space42 enables enterprises to maintain connectivity across remote environments while transforming satellite data into actionable insights that support smarter decision-making.

This integrated capability supports a wide range of enterprise applications, including:

- Connectivity for remote industrial sites and mobile operations
- Monitoring of large-scale infrastructure and assets
- Supply chain visibility across global logistics networks
- Environmental and land-use monitoring
- Real-time operational visibility through geospatial analytics

The impact

With Space42 as a trusted partner, enterprise organisations gain the ability to operate with greater awareness, resilience, and efficiency across their entire operational footprint.

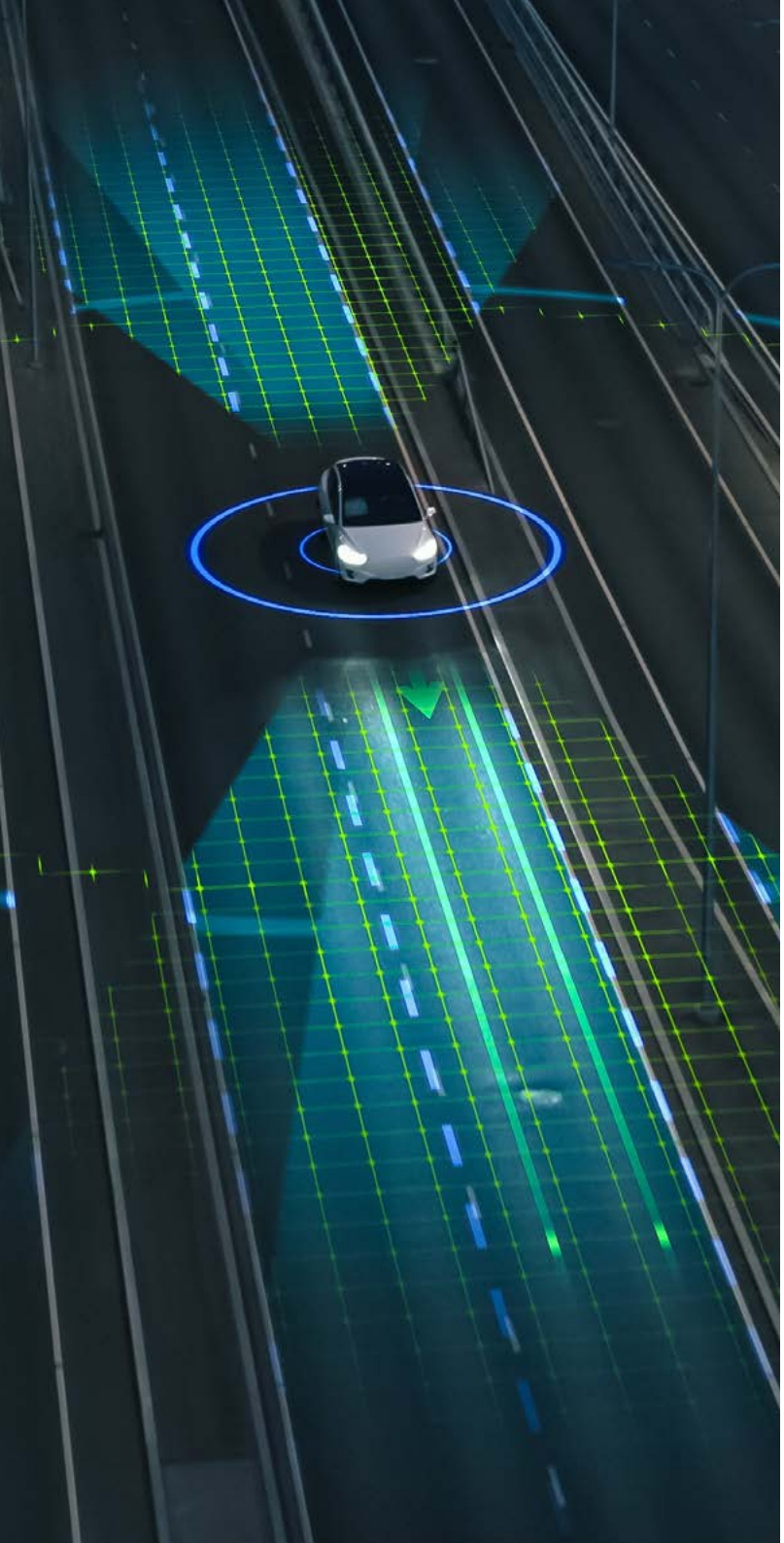
Space42 enables enterprises to operate with real-time visibility, stronger continuity, and seamless coordination across distributed environments. By combining secure connectivity and Earth observation within a unified platform, we move operations from fragmented to fully connected and intelligent.

AUTONOMOUS **MOBILITY**

A Space42 sectorial priority

Autonomous mobility is a strategic priority for Space42, seamlessly bringing together all four company pillars. Autonomous mobility represents one of the most transformative shifts in infrastructure, logistics, and public services.

At Space42, we enable this transformation by combining satellite connectivity, geospatial insight, and AI-driven decision platforms into a unified ecosystem designed for safe, scalable autonomy.



AUTONOMOUS **MOBILITY**

Where Space42
delivers impact

Space42 delivers the digital and space infrastructure required for autonomy to operate reliably across cities, industries, and national mobility systems.

Together, these capabilities enable mobility systems that move beyond connectivity, toward fully intelligent, autonomous operations.

Building the infrastructure behind autonomous systems

Space42's unified platform combines SatCom, geospatial analytics, and AI, creating the foundation required for next-generation mobility ecosystems.

From connectivity to autonomous operations. Space42 supports the full autonomous mobility ecosystem, enabling governments and industries to transition from assisted automation toward Level-4 autonomous operations. By integrating satellite communications with AI-powered platforms, autonomous systems maintain operational continuity even where terrestrial networks cannot perform.

Sovereign mobility for a connected future

As nations invest in autonomous transportation, sovereignty and resilience become critical requirements.

Space42 is developing a sovereign mobility cloud and autonomous ecosystem, enabling:

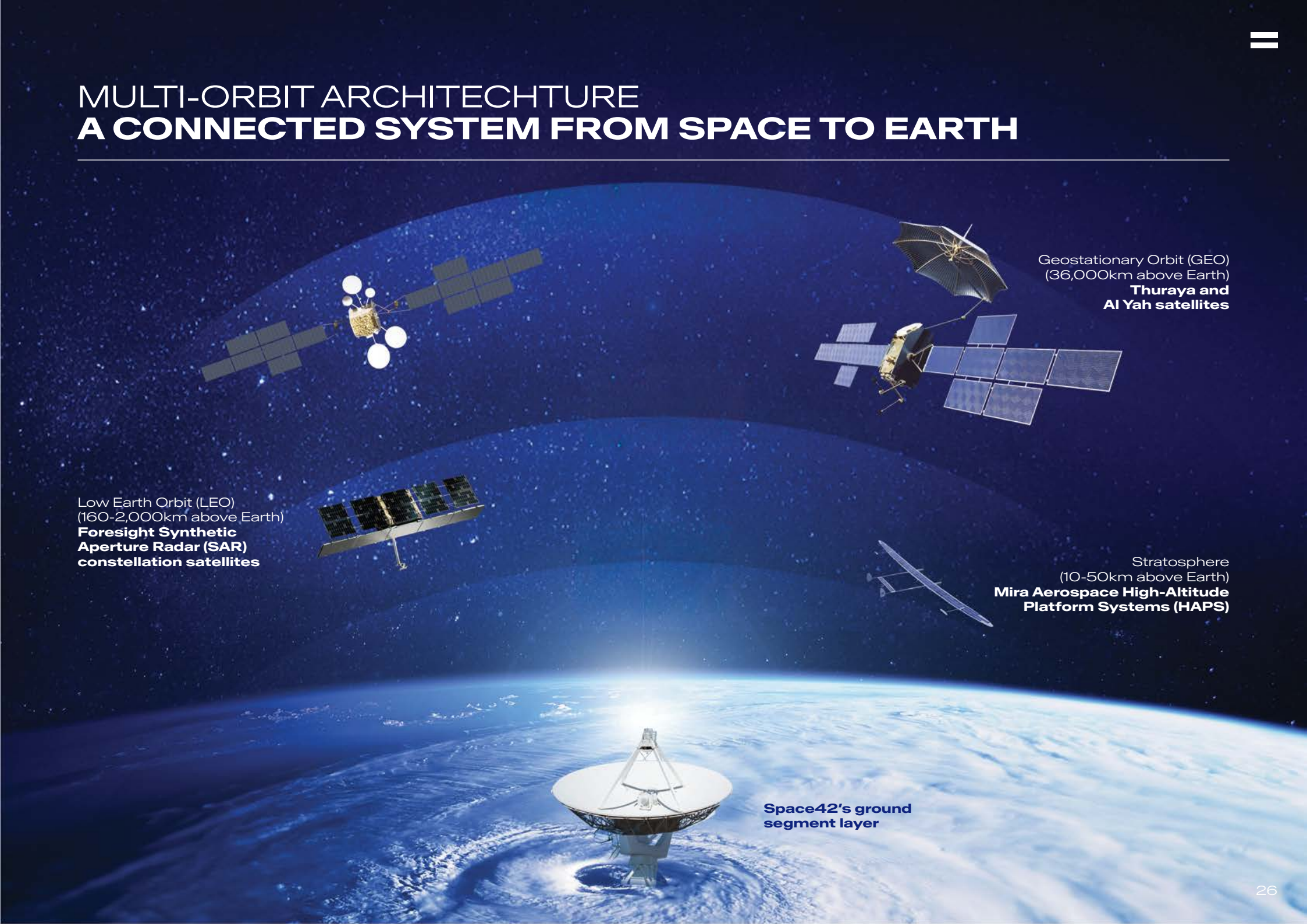
- Secure national data ownership
- Real-time operational intelligence
- Scalable deployment across regions
- Integration with existing vehicle fleets through retrofit autonomy programs

This approach allows governments and operators to accelerate adoption while maintaining control over critical infrastructure and data environments.

04

IMPACT IN ACTION
MULTI-ORBIT ARCHITECTURE

MULTI-ORBIT ARCHITECHTURE
A CONNECTED SYSTEM FROM SPACE TO EARTH



GEOSTATIONARY MOBILE SATELLITE SERVICES CAPABILITIES

Thuraya-4 is Space42's next-generation geostationary satellite, delivering sovereign, secure, and resilient connectivity across the Middle East, Africa, Central Asia, and Europe.

For customers, this means connectivity that does not fail when it matters most. Operations remain connected across remote, mobile, and high-risk environments. This eliminates communication gaps that can disrupt coordination, delay response, or compromise safety.

Its software-defined architecture enables dynamic capacity allocation and resilient performance, while its integration within Space42's multi-orbit system ensures seamless, end-to-end connectivity.

Looking ahead, Thuraya-4 is part of a broader roadmap that includes the development of Al Yah 4 and Al Yah 5, further expanding Space42's geostationary satelitte capabilities and reinforcing long-term capacity, resilience, and sovereign control.

SOVEREIGN SAR CONSTELLATION

Foresight is Space42's sovereign Synthetic Aperture Radar (SAR) constellation, designed to deliver continuous, high-resolution Earth observation that directly informs critical decisions.

For customers, this means no loss of visibility. Operations can be monitored consistently across borders, infrastructure, and environments regardless of weather, light, or terrain. What was previously intermittent or delayed becomes continuous and reliable insight.

Foresight strengthens Space42's position as a sovereign provider of end-to-end geospatial data and insight, enabling both the data layer and the intelligence layer.

Integrated with Space42's AI-driven platform, GIQ, Foresight data is transformed into actionable insight at speed and scale, turning persistent observation into immediate operational advantage.

STRATOSPHERIC CAPABILITIES

Space42's High-Altitude Platform Systems (HAPS), developed through Mira Aerospace, deliver persistent connectivity and real-time observation from the stratosphere, creating a new layer of capability between terrestrial networks and satellites.

By combining the endurance of satellites with the flexibility of aircraft, it provides customers with precise, rapidly deployable coverage that adapts to operational demand.

This enables targeted monitoring, rapid deployment, and low-latency communications in environments where traditional infrastructure cannot adapt quickly enough.

HAPS strengthens Space42's multi-layered, multi-orbit architecture, adding a flexible, sovereign capability that complements GEO and LEO systems.

GROUND SEGMENT LAYER

Space42's ground infrastructure is the layer that connects satellites, platforms, and users into a single, secure system, transforming connectivity and observation into real-time, decision-ready insight.

Space42 powers the UAE's Space Data Center, a national platform for enabling next-generation geospatial infrastructure.

Every data stream, every connection, and every insight is received, processed, and secured within a sovereign ground environment designed for resilience, scale, and speed.

05

THE SPACE42 PORTFOLIO

MANY CAPABILITIES
ONE SYSTEM

Reliable communications on Earth

THURAYA ONE
SATELLITE SMARTPHONE

Specifications

Dimensions (H/W/D):	167 / 76.5 / 11.6 mm
OS:	Andriod 14
Networks:	5G/4G/3G/2G and Thuraya L-band for Satellite
SIM:	Dual Nano SIM cards
Protection:	IP67 dust & waterproof
CPU:	Qualcomm Octa-core Kryo CPU
Memory:	6GB RAM, 128GB memory (extendable to 2TB with Micro SD)
Display:	6.67” AMOLED with Gorilla® Glass
Cameras:	3 rear + 1 front cameras (main camera 50MP)
Battery:	Fast charging 3500 mAh battery with standby time <380 hrs. and talk time <26 hrs. in 5G/4G mode
Navigation:	Supports GPS, Galileo, Glonass, BeiDou
Sensors:	Accelerometer, Ambient Light Sensor, Proximity Sensor, Compass, Gyroscope, Fingerprint

XT LITE

Thuraya XT-LITE Key features

- Satellite calls and sms
- Long-lasting battery
- Ease of use
- Reliable coverage

Specifications

Dimensions (H/W/D):	128 / 53 / 27 mm
Weight:	186g
Call and messaging services:	Satellite calls and satellite SMS
Network frequency:	L-Band
Satellite antenna:	Omni directional (walk-and-talk functionality)
GNSS:	GPS, BeiDou, Glonass
Network features:	Call barring, Call diverting, Conference calls, Call waiting, Closed User Group, Voice mail
Battery life - talk-time:	Up to 6 hours
Battery life - standby time:	up to 80 hours
Organizer:	Alarms, Calendar, Calculator, Stopwatch, World time
External interfaces:	UDC data cable with USB connector, earphone jack (3.5mm), Micro USB Charger

XT PRO

Thuraya XT-PRO key features:

- Global navigation satellite system
- Long talk-time
- Glare resistant gorilla® glass display
- Dedicated SOS button
- Compact and rugged design
- Calls, sms and internet connectivity in satellite mode

Specifications

Dimensions (H/W/D):	128 / 53 / 27 mm
Weight:	212g
Call and messaging services:	Calls, SMS, SMS to email
Data services:	GmPRS up to 35/12 kbps (down/up) Circuit switched 9.6 kbps
Display:	2.4” toughened Gorilla® glass outdoor display
GNSS:	GPS, BeiDou, Glonass
Ingress protection:	IP55/IK05
Battery life - talk-time:	up to 9 hours
Battery life - standby time:	up to 100 hours
External interfaces:	Micro USB charger, UDC jack for data transmission, Earphone connector (3.5mm), Antenna connector for docking units

Environmental conditions

Temprature

Operational:	-10° C to +55° C
Storage:	-20° C to +70° C
Humidity:	5 to 95% RH (at 40° C)

XT
PRO DUAL

Thuraya XT-PRO DUAL key features:

- Dual mode. Dual SIM.
- SAT and LTE "Always On"
- Advanced navigation capabilities
- Powerful battery
- Glare resistant Gorilla® glass display
- Dedicated SOS button
- Rugged design
- Incoming call notifications in satellite mode

Specifications

Dimensions (H/W/D):	138 / 57 / 27 mm
Weight:	232g
Call and messaging services:	Calls, SMS, SMS to email
Data services:	**Satellite** GmPRS 35/12 kbps (down/up) Circuit switched 9.6 Kbps **LTE/4G** up to 30 Mbps down up tp 9 Mbps up
System/Frequencies	Thuraya L-Band satellite 4G: B1, B3, B7, B8, B20, B28A 3G: B1, B3, B8
SIM cards:	**Satellite -** 1 SAT SIM slot (Mini-SIM) **Cellular -** 1 SIM slot (Micro-SIM)
Display:	2.4" toughened Gorilla® glass outdoor display
GNSS:	GPS, BeiDou, Glonass, Galileo
Ingress protection:	Water resistant, dust resistant, shock proof (IP65/ IK05)
Battery:	3400 mAh battery: - up to 11 hours talk time - up to 100 hours standby time
External interfaces:	USB-C connector, Earphone connector (3.5mm), Antenna connector for docking units

Environmental conditions

Temprature	
Operational:	- 10° C to + 55° C

FDU-XT
NEO

The FDU-XT Neo is a docking adapter that allows you to use Thuraya satellite phones, indoors. Designed for versatility, it can be easily installed as a desktop or wall-mounted unit.

Simply attach your Thuraya XT-PRO or XT-PRO DUAL phone to the cradle, connect the included outdoor antennas to the FDU-XT Neo and enjoy Thuraya satellite services.

Specifications

Dimensions (H/W/D):	86 / 235 / 198 mm
Interfaces:	2 × RJ-11: • External telephone connection (voice call) • Auxiliary handset connection (voice call) 1 × USB PC connection 1 × Speaker (Aux out) connection 2 × SMA connectors: • Satellite antenna connection • GPS antenna connection
Power:	USB PD adapter 240–110V Input power DC 15V

Key features

- 25 meter antenna cables for flexible installation
- Compatible with Thuraya XT-PRO and XT-PRO DUAL (via USB-C or UDC)
- Supports high-quality voice transmission via auxiliary handset, speakerphone or analogue extension telephone
- Charges the Thuraya phone while being docked in the cradle
- Supports satellite GmPRS and circuit switched data services

IP
NEO C

Specifications

Dimensions (H/W/D):	225 / 225 / 61.5 mm
Weight (incl. battery):	2.1 KG
Data Capabilities	
> 5° elevation:	Up to 1024 kbps (Rx / Tx)
Voice:	Standard VoIP Embedded SIP Server PPT Push-To-Talk
Frequency Range:	
Tx (MHz) Rx (MHz)	1626.5 - 1660.5 and 1668 - 1675 1518.0 - 1559.0
GNSS:	GPS, Galileo, Beidou, Glonass
Languages:	EN, AR, FR, PR, ES, RU, JP, CN
Approval:	CE, RED, RoHS, WEEE, FCC, UL, RCM Thuraya Type Approval

Other features

Space42 Connect App: (Available for Android / IOS):
Control your IP NEO with your Smartphone

Set-up and Router Functionality:
Webserver, NAT Router, Admin control (password protected), DHCP, Network Management, Remote Management, PPPoE

Power

DC input range:	12 - 24 VDC (max. 10.8 - 33.6 VDC)
PoE input:	PoE (802.3bt Type 3 Class 6 via RJ45)
PoE output:	PoE (802.3at Type 1 Class 2 via RJ45)
Power consumption:	
Standby / Transmit: During charging:	4.5W / 22W (typical) 75W (max.)
AC/DC power supply:	
Input: Output:	100-240 VAC, 47-63Hz, 64W 19 VDC
Built-in Battery:	Lithium ion (rechargeable)
Nom. voltage / capacity:	10.8 V / 6.9 Ah
Stand-by time:	Up to 38 hours
Receive:	Up to 5 hours @ 1024 Kbps
Transmit:	Up to 3 hours @ 1024 Kbps
Recharge time:	< 3 hours (0-100%)
Charge temperature:	0ºC to 45ºC

Environmental conditions

Temperature	
Operational: Storage:	-21°C to +55°C (ambient) -21°C to +50°C
Water and dust:	IP55 Compliant

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
Ethernet Ports:	1 x RJ45 (PoE input for ext. power) 1 x RJ45 (PoE output IP Handset)

User interface:
2 x LED (Status and WLAN), Power Button, Reset Button, Web Interface

IP
NEO M

Specifications

Dimensions (H/W/D):	225 / 225 / 61.5 mm
Weight (incl. battery):	2.2 KG
Data Capabilities	
> 5° elevation:	Up to 1024 kbps (Rx / Tx)
Voice:	Standard VoIP Embedded SIP Server PPT Push-To-Talk
Frequency Range:	
Tx (MHz) Rx (MHz)	1626.5 - 1660.5 and 1668 - 1675 1518.0 - 1559.0
GNSS:	GPS, Galileo, Beidou, Glonass
Languages:	EN, AR, FR, PR, ES, RU, JP, CN
Approval:	CE, RED, RoHS, WEEE, FCC, UL, RCM Thuraya Type Approval

Other features

Space42 Connect App: (Available for Android / IOS):
Control your IP NEO with your Smartphone

Set-up and Router Functionality:
Webserver, NAT Router, Admin control (password protected), DHCP, Network Management, Remote Management, PPPoE

Power

DC input range:	12 - 24 VDC (max. 10.8 - 33.6 VDC)
PoE input:	PoE (802.3bt Type 3 Class 6 via RJ45)
PoE output:	PoE (802.3at Type 1 Class 2 via RJ45)

Power consumption:	
Standby / Transmit: During charging:	4.5W / 22W (typical) 75W (max.)
AC/DC power supply:	
Input: Output:	100-240 VAC, 47-63Hz, 64W 19 VDC
Built-in Battery:	Lithium ion (rechargeable)
Nom. voltage / capacity:	10.8 V / 6.9 Ah
Stand-by time:	Up to 38 hours
Receive:	Up to 4 hours @ 1024 Kbps
Transmit:	Up to 3 hours @ 1024 Kbps
Recharge time:	< 3 hours (0-100%)
Charge temperature:	0ºC to 45ºC

Environmental conditions

Temperature	
Operational: Storage:	-25°C to +55°C (ambient) -40°C to +85°C
Water and dust:	IP68
MIL-STD-810G	
EMI/EMC:	MIL-STD-461H

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
Ethernet Ports:	1 x RJ45 (PoE input for ext. power) 1 x RJ45 (PoE output IP Handset) 1 x RJ45
USB Port:	1 x USB-C

VOYAGER
NEO

Specifications

Dimensions:	
Height:	9.7 cm (without spacers)
Width:	Ø 32.1 cm
Weight:	4.8 kg
Data Capabilities	
> 5° elevation:	Up to 1024 kbps (Rx / Tx)
Voice	Standard VoIP Embedded SIP Server PTT with Mobile Gateway Neo
Frequency Range:	
Tx (MHz)	1626.5 - 1660.5 and 1668 - 1675
Rx (MHz)	1518.0 - 1559.0
Frequency Range:	GPS, Galileo, Beidou, Glonassr
Languages:	EN, AR, FR, DE, ES, RU, JP, CN
Approval:	CE, RED, RoHS, WEEE, FCC, UL, RCM Thuraya Type Approval

Other features

Space42 Connect App:

Turns a Smartphone into a Satphone.
Available for Android / IOS.

Set-up and Router Functionality:

Webserver, NAT Router, Admin control (password protected), DHCP, Network Management, Remote Management, PPPoE

Power

DC input range:	12 - 24 VDC (Max. 10.8 to 32 VDC)
Power (max):	70W (@10.5 - 32V)

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
Ethernet:	10 / 100 / 1000 Mbps

Combined DC power and Ethernet connector:

Combined connector providing DC power input, ignition and Ethernet (PoE 802.3bt Type 3) connectivity.

User interface:

One LED (Status), Web Interface,
Reset Button, SIM card connector

Environmental conditions

Temperature

Operational (ambient):	-25°C to +55°C
Storage:	-40°C to +85°C
Water and dust:	IP68
Relative humidity:	MIL-STD-810G, Test method 507.6
EMI/EMC:	EN 01-301489, EN 17-301489, EN 19-301489

COMMANDER
NEO

Specifications

Dimensions:	
Height:	11.7 cm (with 3 cm spacers)
Width:	Ø 32.1 cm
Weight:	4.8 kg
Data Capabilities	
> 5° elevation:	Up to 1024 kbps (Rx / Tx)
Voice	Standard VoIP Embedded SIP Server PPT Push-To-Talk with Mobile Gateway Neo M
Frequency Range:	
Tx (MHz)	1626.5 - 1660.5 and 1668 - 1675
Rx (MHz)	1518.0 - 1559.0
Frequency Range:	GPS, Galileo, Beidou, Glonass
Languages:	EN, AR, FR, DE, ES, RU, JP, CN
Approval:	CE, RED, RoHS, WEEE, FCC, UL, RCM Thuraya Type Approval

Other features

Space42 Connect App:

Turns a Smartphone into a Satphone.
Available for Android / IOS.

Set-up and Router Functionality:

Webserver, NAT Router, Admin control (password protected), DHCP, Network Management, Remote Management, PPPoE

Power

DC input range:	12 - 24 VDC (Max. 10.8 to 32 VDC)
Power (max):	70W (@10.5 - 32V)

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
Ethernet:	10 / 100 / 1000 Mbps

Combined DC power and Ethernet connector:

Combined connector providing DC power input, ignition and Ethernet (PoE 802.3bt Type 3) connectivity.

User interface:

One LED (Status), Web Interface,
Reset Button, SIM card connector

Environmental conditions

Temperature

Operational:	-25°C to +55°C (ambient)
Storage:	-40°C to +85°C
Water and dust:	IP68
MIL-STD-810G	
EMI/EMC:	MIL-STD-461H

ORION NEO

Specifications

Dimensions:	
Antenna height:	9.7 mm
Antenna width:	Ø 32.1 mm
Weight	4.8 kg
Data Capabilities	
> 50° elevation:	Tx: Up to 1024 kbps (no ship roll) Rx: Up to 1024 kbps (30° ship roll)
> 20° elevation:	Tx: Up to 1024 kbps (no ship roll) Rx: Up to 600 kbps (30° ship roll)
> 10° elevation:	Tx/Rx: Up to 600 kbps (no ship roll)
Voice:	Standard VoIP, Embedded SIP Server PTT with Mobile Gateway Neo
Frequency Range:	
Tx (MHz)	1626.5 - 1660.5 and 1668 - 1675
Rx (MHz)	1518.0 - 1559.0
GNSS:	GPS, Galileo, Beidou, Glonass
Languages:	EN, AR, FR, PR, ES, RU, JP, CN
Approvals:	CE, RED, RoHS, WEEE, FCC, UL, RCM Thuraya Type Approval

Environmental conditions

Temperature	
Operational *(ambient)*:	-25 to +55ºC at min. 1m/s windload
Storage:	-40ºC to +85ºC
Relative humidity:	MIL-STD-810G, Test method 507.6
EMI/EMC:	EN 01-301489, EN 17-301489, EN 19-301489
Water and dust:	IP68

Power

DC input range:	12 to - 24 VDC (Max. 10.8 to 32 VDC)
Power *(max):*	70W (@32 - 10.5V)

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
Ethernet:	10 / 100 / 1000 mbps
Combined DC power and Ethernet connector:	Combined connector providing DC power input, ignition and Ethernet (PoE 802.3bt Type 3) connectivity.
User interface:	One LED (Status), Web Interface, Reset Button, SIM card connector

MOBILE GATEWAY
NEO C WITH IP HANDSET

- Advanced IP-based data communication device, supporting a variety of software applications such as video compression, 3rd party encryption, email clients, etc.
- VoIP technologies optimized for use under satellite link conditions
- Works seamlesley with IP NEO C (portable/fixed), Voyager NEO (Land Mobile), and Orion NEO (Maritime) satellite terminals

Specifications

Dimensions:	65 / 166 / 326 mm (H/D/W)
Weight:	2.7 kg
Languages:	EN, AR, FR, DE, ES, RU, JP, CN

Power

DC input range:	12 or 24 VDC
PoE input:	PoE (802.3bt Type 3 Class 6 via RJ45)
PoE output:	PoE (802.3at Type 1 Class 2 via RJ45)

Power consumption:
Max. 172W with all outputs loaded

Environmental conditions

Temperature

Operational (ambient):	-21 to +55ºC
Storage:	-40°C to +85°C

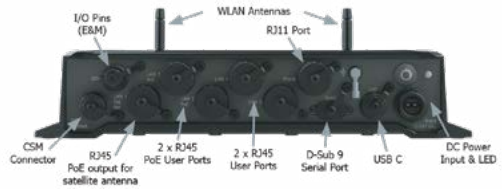
Water and dust:	IP55 Compliant

Router:	NAT Router, DHCP, PPPoE, SIP Server, Network Mgmt, Remote Mgmt, Webserver
Security:	256-bit AES, Password Protected Admin Control, Over-the-air Factory Reset.
IP Traffic:	Supports IP, TCP and UDP (IPv4 and IPv6)

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
5x Ethernet Ports:	2 x RJ45 (PoE 802.3AT Type 1) (Power & Connection - e.g. IP Handset) 2 x RJ45 (Standard LAN) 1 x RJ45 (PoE 802.3BT Type 3) (Power & Connection - satellite terminal)
USB Connector:	USB 3 for diagnostic, SW update, LTE dongle
Phone Connector:	RJ11
Serial Connector:	D-Sub 9
I/O Connector:	4 Pins (for E&M)

User interface:
1 LED (Status), Power Button



MOBILE GATEWAY
NEO M WITH IP HANDSET

- Advanced IP-based data communication device, supporting a variety of software applications such as video compression, 3rd party encryption, email clients, etc.
- VoIP technologies optimized for use under satellite link conditions
- Works seamlesley with IP NEO M (portable/ fixed), Voyager NEO (Land Mobile), and Orion NEO (Maritime) satellite terminals

Specifications

Dimensions:	65 / 166 / 326 mm (H/D/W)
Weight:	2.7 kg

Power

DC input range:	12 or 24 VDC
PoE input:	PoE (802.3bt Type 3 Class 6 via RJ45)
PoE output:	PoE (802.3at Type 1 Class 2 via RJ45)

Power consumption:
Max. 172W with all outputs loaded

Environmental conditions

Temperature

Operational (ambient):	-21 to +55ºC
Storage:	-21°C to +50°C

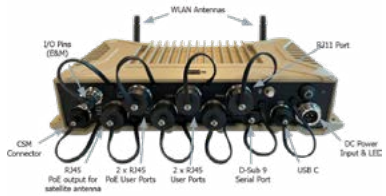
Water and dust:	IP68 Compliant (submersible)
EMI/EMC	MIL-STD-461H

MIL-STD-810G

Router:	NAT Router, DHCP, PPPoE, SIP Server, Network Mgmt, Remote Mgmt, Webserver
Security:	256-bit AES, Password Protected Admin Control, Over-the-air Factory Reset.
IP Traffic:	Supports IP, TCP and UDP and more

Interfaces

WLAN Access Point:	802.11 b/g/n/ac
5x Ethernet Ports:	2 x RJ45 (PoE 802.3AT Type 1) (Power & Connection - e.g. IP Handset) 2 x RJ45 (Standard LAN) 1 x RJ45 (PoE 802.3BT Type 3) (Power & Connection - satellite terminal)
USB Connector:	USB 3 for diagnostic, SW update, LTE dongle
Phone Connector:	RJ11
Serial Connector:	D-Sub 9
I/O Connector:	4 Pins (for E&M)
User interface:	1 LED (Status), Power Button



T220 UAV **SYSTEM**

The T220 matches the connectivity and performance of much larger satcom systems in a compact, lightweight, and low-power design. This higher efficiency improves tactical UAV performance for BLOS operations and opens up new payload configuration options. Ideal for military missions, real-time insight, mapping surveys and scientific research.

Technical Specification

Dimensions and Weight	Length: 241 mm Width: 157 mm Height: 64 mm Weight: 2 kg
Interfaces	Serial port options: 1. Two RS-232 interfaces, one with hardware flow control 2. Two RS-485 interfaces 3. One RS-422 (full-duplex) interface 4. Two CAN interfaces Ethernet port: 2 Power port: +12 VDC to +32 VDC at up to 2.5 A continuous
Altitude	Up to 20,000 ft
Temperature Range	Operating: -40°C to +55°C
Voltage	+12 VDC to +32 VDC
Power Consumption	Up to 30W

Features

- Weight- and size-optimized for small tactical UAVs
- Airframe-mounted single LRU
- Best-in-class data rates up to 1 Mbps
- Includes two serial interfaces, two Ethernet interfaces, discrete and power inputs
- Seamless coverage over Thuraya-4 satellite

T320 FIXED WING
SYSTEM

Supporting VoLTE and passenger connectivity including internet access, email, and video conferencing; the system enhances both operational efficiency and onboard communication. Its small, compact footprint coupled with a low-profile, fuselage-mount antenna allows seamless integration on fixed-wing aircraft without affecting aerodynamics or space.

IGA 5001T
GA - INTERMEDIATE GAIN ANTENNA

Technical Specification

Dimensions and Weight	Length: 581 mm Width: 175 mm Height: 50 mm Weight: 3.7 kg
Interfaces	RF antenna port: TNC female Control port: TNC female Power: 28 VDC (nominal)
Altitude	Up to 70,000 ft
Temperature Range	Operating: -65°C to +70°C Storage: -65°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 7W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- Low profile
- Small footprint
- Solid state highly reliable design
- Connected via two TNC bulkhead feedthroughs
- Antenna adaptor plate available
- Seamless coverage over Thuraya-4 satellite

T320 FIXED WING
SYSTEM

HLD-5011A
HLD - HIGH POWER, LOW NOISE AMPLIFIER AND DIPLEXER

Technical Specification

Dimensions and Weight	Length: 197 mm Width: 190 mm Height: 60 mm Weight: 2.5 kg
Interfaces	Antenna port: TNC female RF RX port: TNC female RF TX port: N-type male Power/control port: MS3470L1210P
Temperature Range	Operating: -55°C to +70°C Storage: -55°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 50W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- *Single box unit with low noise receive amplifier and high gain transmit amplifier*
- *Reduces system size*
- *Utilized with an SDU*
- *Can be used with HGA-6500T and IGA-5001T antennas*
- *Can be mounted in non-pressurized environment*

SDU-5048
SDU - SATELLITE DATA UNIT

Technical Specification

Dimensions and Weight	Length: 343 mm Width: 57 mm Height: 194 mm Weight: 4.5 kg
Interfaces	ARINC 600 connector, 3 cavities: Top plug: 50 ohm coax RF TX, configuration pins, ATE pins Middle plug: Ethernet, audio, ARINC 429, SCM, discrete Bottom plug: 50 ohm coax RF RX, antenna control DC power
Temperature Range	Operating: -40°C to +55°C Storage: -55°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 44W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- *IP data and VoLTE services*
- *2 MCU package size*
- *Low pressure operation (unpressurized aircraft cabin)*
- *User friendly web interface*

T420 ROTARY WING **SYSTEM**

Featuring a lightweight, high-gain antenna, the system ensures strong, reliable connectivity without impacting aircraft performance. Engineered to handle critical mission data such as ISR, troop information, and mission video, it guarantees robust data transfer. Its compact components enable easy integration in space-constrained environments. With higher throughput than competing solutions, the T420 is ideal for demanding aviation missions requiring dependable, high-capacity communication and seamless data streaming.

HGA 6500T

HGA - HIGH GAIN ANTENNA

Technical Specification

Dimensions and Weight	Diameter: 257 mm Height: 259 mm Base plate size: 334 x 290 mm Weight: 3.8 kg
Interfaces	RF antenna port: TNC male Control port: SMA female
Altitude	Up to 70,000 ft
Temperature Range	Operating: -65°C to +70°C Storage: -65°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 22W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- Smallest swept volume available for a mechanically steered high gain antenna
- Excess gain can be used for longer RF cable runs between antenna and HLD
- Integral Beam Steering Unit with ARINC 600 interface reduces overall box count
- Ruggedized and qualified for helicopter installation
- Externally mountable with fairing, no additional radome required
- Seamless coverage over Thuraya-4 satellite

T420 ROTARY WING **SYSTEM**

HLD-5011A

HLD - HIGH POWER, LOW NOISE AMPLIFIER AND DIPLEXER

Technical Specification

Dimensions and Weight	Length: 197 mm Width: 190 mm Height: 60 mm Weight: 2.5 kg
Interfaces	Antenna port: TNC female RF RX port: TNC female RF TX port: N-type male Power/control port: MS3470L1210P
Temperature Range	Operating: -55°C to +70°C Storage: -55°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 50W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- *Single box unit with low noise receive amplifier and high gain transmit amplifier*
- *Reduces system size*
- *Utilized with an SDU*
- *Can be used with HGA-6500T and IGA-5001T antennas*
- *Can be mounted in non-pressurized environment*

SDU-5048

SDU - SATELLITE DATA UNIT

Technical Specification

Dimensions and Weight	Length: 343 mm Width: 57 mm Height: 194 mm Weight: 4.5 kg
Interfaces	ARINC 600 connector, 3 cavities: Top plug: 50 ohm coax RF TX, configuration pins, ATE pins Middle plug: Ethernet, audio, ARINC 429, SCM, discrete Bottom plug: 50 ohm coax RF RX, antenna control DC power
Temperature Range	Operating: -40°C to +55°C Storage: -55°C to +85°C
Voltage	28 VDC
Power Consumption	Up to 44W
Qualification Category	DO-160E (detailed information can be provided upon request)

Features

- *IP data and VoLTE services*
- *2 MCU package size*
- *Low pressure operation (unpressurized aircraft cabin)*
- *User friendly web interface*

T-TAC
PRODUCTS

ManPack

The T-TAC ManPack is a mobile terminal which is used by forces on foot to communicate on the move. With the omni-directional antenna there is no need to stop and point.

Key features

- Compact and light weight (109x149mm, 410g)
- Robust and durable for harsh environmental conditions (IP68)
- One cable connection makes it easy to use
- Pole mount to optimize functionality and reception

Vehicular

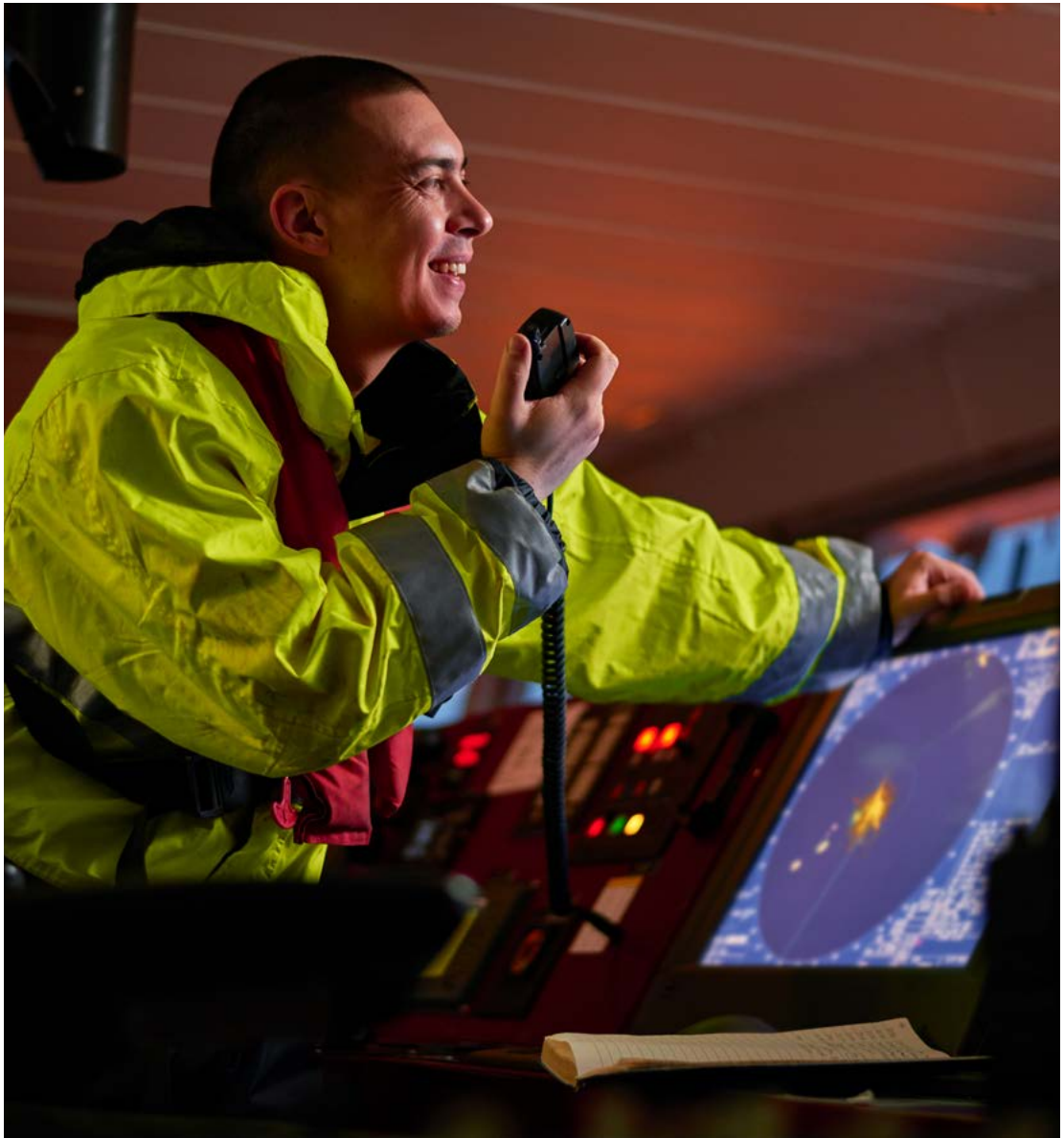
The T-TAC Vehicular is a fixed mobile terminal which is usedby forces to communicate on the move. It is typically mounted on the car roof with either magnetic mount or rail mount.

The tactical UHF/VHF is placed inside the car and connected to the Converter Unit that can be placed for example in the trunk.

Key features

- Small antenna size and light weight (109x142mm, 450g)
- Robust and ingress protected unit (IP68)
- Easy installation - magnetic mount or rail mount
- Cable sideways to get unit low mounted

T-TAC
PRODUCTS



Maritime

The T-TAC Maritime is a fixed installed terminal on board of vessels, together with the Maritime omni-antenna. The antenna is usually mounted on a pole whereas the pole mount is integrated into the antenna.

The T-TAC Maritime terminal is powered through the main or auxiliary battery on board the vessel and is therefore designed to withstand power surges produced by engine cranking.

Key features

- Small antenna size with pole mount for easy installation on vessels (109x183mm, 410g)
- Robust and ingress protected unit that matches maritime environment (IP68)
- Bottom cable entry for simple cabling

Aeronautical

The T-TAC Aero system utilizes a passive standard approved antenna for smaller airframes and helicopters.

The antenna has high efficiency and is connected to a small HPA / LNA unit that can be mounted inside the aircraft.

Key features

- Small and lightweight:
  Antenna: 272 x 97 x 116 mm (770g)
  HLD: 31 x 164 x 98 mm (630g)
- DO-160 certified for use on aircrafts
- Built to withstand shock and extreme vibrations (IP68)
- Durable to harsh environmental conditions

THURAYA
MBH

Specifications

Dimensions:	**Terminal** 301 / 181 mm (Ø X H) **PoE Injector** 115 X 90 X 30 mm (L X W X H)
Weight:	**Terminal** 3.30kg **PoE Injector** 0.47kg
Data capabilities:	Standard IP Up to 300/100 kbps
Vibration:	2 ~ 13.2 ~ 100 Hz , 1mm, 0.7gn, 3-axis 5~500Hz, 3-axis
Frequency range:	Tx 1626.5 - 1660.5 (MHz) Rx 1518.0 - 1559.0 (MHz)
GNSS:	GPS, Galileo, Beidou, Glonass
Approvals:	CE, UKCA, RoHS, REACH, ITU GMPCS-MoU, Thuraya certified

Power

PoE input range:	12 - 36 VDC
Standby/Transmit:	16 W / 25 W

Terminal environmental conditions

Temprature

Operational (ambient):	-25°C to +55°C
Storage:	-40°C to +80°C
Humidity:	5 to 95 % RH at 40 °C
Water and dust:	IP67 & IP68

Interfaces

MBH terminal	**Wi-Fi:** 2.4GHz 802.11 b/g/n WPA/WPA2/WPA3 **Ethernet:** PoE cable connection from PoE injector **SIM:** Nano
PoE injector	**DC power input** **Ethernet:** • PoE cable connection to Thuraya MBH • Data towards LAN

Packages

Main package	Thuraya MBH PoE injector DC cable (5m)
Land pack accessory	Magnet mount kit PoE cable (6m)
Maritime pack accessory	Pole mount kit PoE cable (25m)

MARINESTAR

Service advantage for Mobile Network Operators (MNOs)

The MarineStar is backed by local numbering plan and GSM roaming over the Thuraya satellite network. As a result, users continue to stay connected on GSM numbers even outside terrestrial coverage.

- Use local MNO SIM cards on local numbering plan
- Enables inexpensive communication over satellite
- Provides customized packages as per national requirements

Specifications

Dimensions:	**ADU** 185 / 177 mm **BDU** 203 / 190 / 72.7 mm (L X W X H)
Weight:	**ADU** 1.30kg **BDU** 1.07kg
Connectors:	DC input, GPIO port (2in + 2out); RS-232 serial port, NMEA port, RJ-11 port for analog extenstion, 3.5mm audio output, Sim slot
User interface:	2.4 inch display, SOS button, Key pad, Navigation pad, and low or high external power input LED indicator
External connector:	SAT and GPS RF cable connections to ADU

Terminal environmental conditions

Temprature

Operational (ADU):	-25°C to +55°C
Operational (BDU):	-15°C to +55°C
Storage (ADU):	-40°C to +80°C
Storage (BDU):	-20°C to +70°C
Ingress protection (ADU):	IP 67
Ingress protection (BDU):	IP 32
Operating humidity:	5 to 95% RH at 40°C

External power

Main power input:	10.8-31.5VDC
Maximum current:	3.6A for 12VDC and 1.8A for 24VDC

Others

Add-on application:*	Thuraya SatTrack

* This is an optional service

T2M
DUAL

Communication modes

- Fleet management
- Rail tracking
- Oil & Gas SCADA and Pipeline monitoring
- Smart grid and smart metering applications
- Security, surveillance and tracking
- Weather station monitoring
- Hydro and environmental management

OTA:

- Over-the-air command and control
- Onboard memory
- Automation
- Sensor data
- Dispatch/Receive
- Usage history
- Choice of GSM and Satellite networks

Specifications

Dimensions:	133 x 103 x 39.8mm (L X W X H)
Weight:	T2M – DUAL terminal - 395g Including accessories - 1.35kg
Operating temperature:	-300C ~ +700C Excluding backup batter -20 oC ~ +600C Including backup battery
Battery capacity:	3000 mAh Li-ion
Storage temperature:	-40°C ~ +85°C
Vibration	Random 5~20Hz 0.05g2/Hz, 20~150Hz: - 3dB/oct.(1.7g rms), 3-axis, 30 minutes for each axis
Humidity:	+700C / 95% / 48 Hours, Operating

GEOSPATIAL
DATA AND ANALYTICS

Turning space
data into
actionable insight

GEOSPATIAL INSIGHT **PLATFORM (GIQ)**

Transforming geospatial data into operational insight

GIQ is Space42's advanced geospatial data and analytics platform, designed to integrate satellite imagery, sensor data, and advanced AI analytics into a unified operational environment.

While Foresight delivers continuous Earth observation, GIQ ingests SAR, optical, and multi-source data and applies AI-driven analytics to convert raw imagery into structured, actionable insight that can be used across missions, sectors, and decision environments.

This removes the biggest barrier in geospatial workflows: the gap between data collection and usable insight. Through GIQ, organisations gain access to a unified platform that delivers timely, interpretable, and directly applicable insight, moving away from managing fragmented datasets, complex tools, and manual analysis processes.

CORE PLATFORM **CAPABILITIES**

GIQ is built to handle the full geospatial intelligence lifecycle:

Interactive visualization and reporting

Transforms complex data into intuitive outputs, enabling decision-makers to interpret and act quickly without deep technical expertise.

Sovereign deployment and data control

Ensures sensitive data remains within controlled environments, supporting national security and enterprise governance requirements.

Automated intelligence workflows

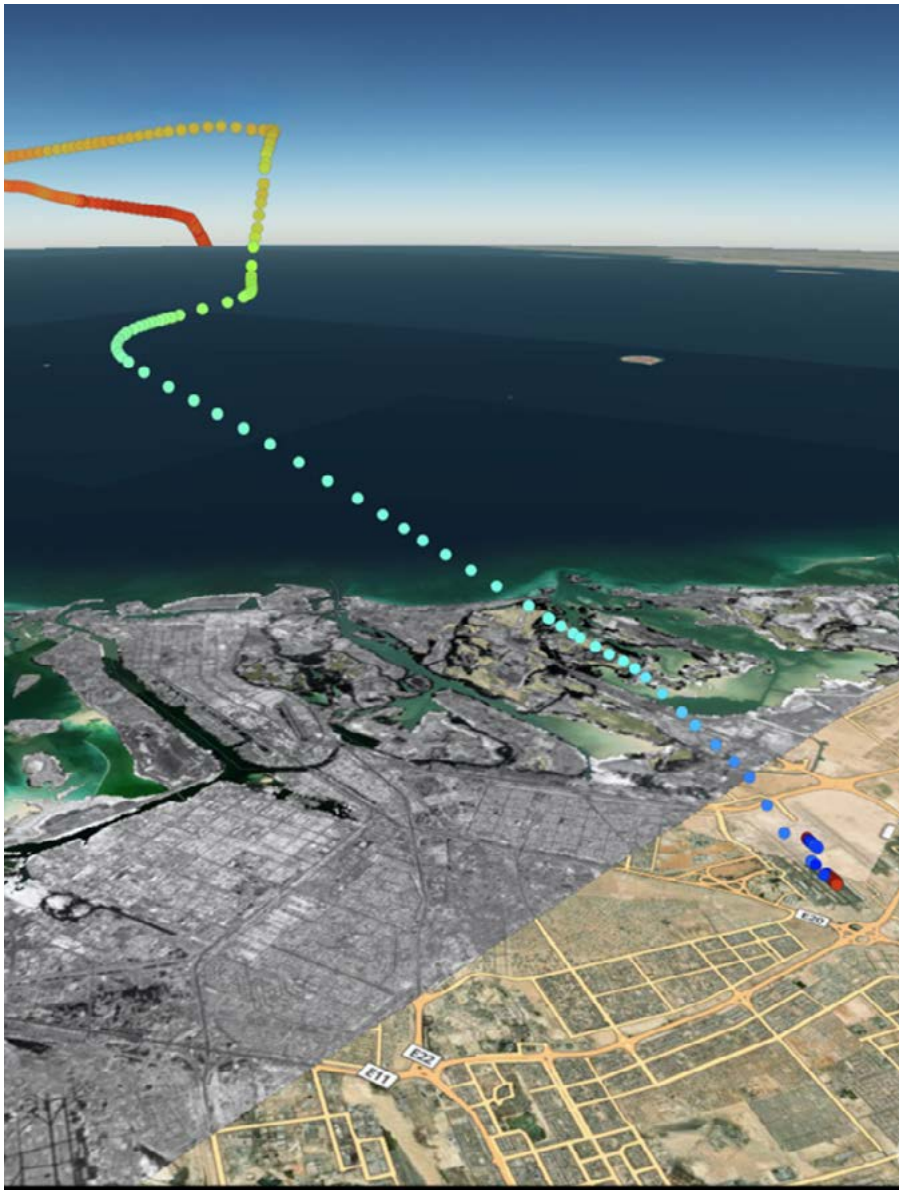
Streamlines collection, processing, and reporting into a unified pipeline, significantly reducing manual effort and latency.

Multi-source data integration

Aggregates SAR, optical, and external data sources into a single environment, removing the need for multiple platforms and providers.

AI-powered analytics

Applies advanced models for object detection, classification, pattern-of-life analysis, and predictive insight generation.



Secure access to geospatial data and analytics services

GIX is Space42's secure, operational geospatial data and analytics platform, designed for environments where insight must be produced, managed, and acted on within controlled, mission-critical settings.

While GIQ enables broad access to geospatial data and insight at scale, GIX is built for organizations that require end-to-end control over the data lifecycle, from tasking and analysis to dissemination and decision-making. It is designed to operate within sovereign, restricted, or high-security environments, where data sensitivity, workflow control, and operational assurance are critical.

This means insights are generated faster, as well as being managed, secured, and operationalized within their own environment, without dependency on external systems or fragmented workflows.

KEY CAPABILITIES

GIX is designed to support mission-critical operations through:

Secure, sovereign deployment

Deployed within customer-controlled environments, ensuring data sovereignty, security, and compliance at all stages.

Advanced reporting and dissemination

Enables rapid creation of structured reports and interactive outputs, ensuring insights are delivered to the right stakeholders at the right time.

AI-enabled analysis and automation

Applies AI models for object detection, classification, forecasting, and pattern-of-life analysis, accelerating analytics production.

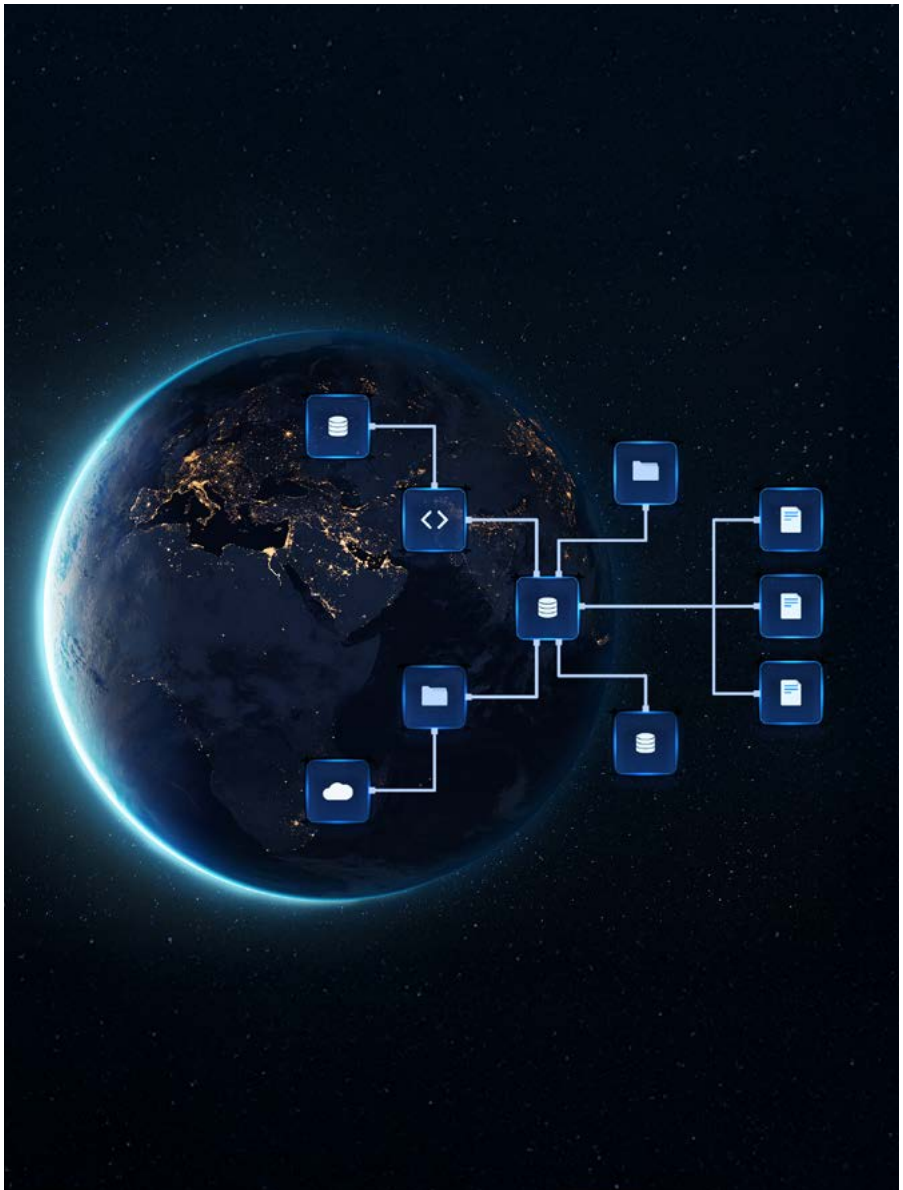
Integrated workflow and analyst management

Coordinates analysts, permissions, and outputs within a unified system, improving efficiency and traceability.

End-to-end intelligence lifecycle management

Digitises the full workflow from collection request and tasking through to analysis, reporting, and dissemination.

GEOSPATIAL **MAPPING**



From data to decision-grade environments

Space42 delivers high-precision geospatial mapping that forms the foundation for planning, simulation, and operational decision-making.

By combining satellite imagery, aerial data, and ground-based surveys, Space42 creates high-fidelity digital representations of the physical world.

This provides a continuously updated, accurate view of reality, supporting infrastructure planning, network design, environmental monitoring, and autonomous operations.

Integrated within Space42's broader ecosystem, these mapping products feed directly into digital twin environments and AI-driven analytics, enabling organisations to move from static data to dynamic, decision-ready insight.

KEY **CAPABILITIES**

Advanced spatial products

- 3D Photorealistic Mesh
- Digital Twin foundations

Core mapping outputs

- Terrain & surface models
- Digital Terrain Models (DTM) → bare earth
- Digital Surface Models (DSM) → DTM + buildings, vegetation, structures

2D and 3D maps

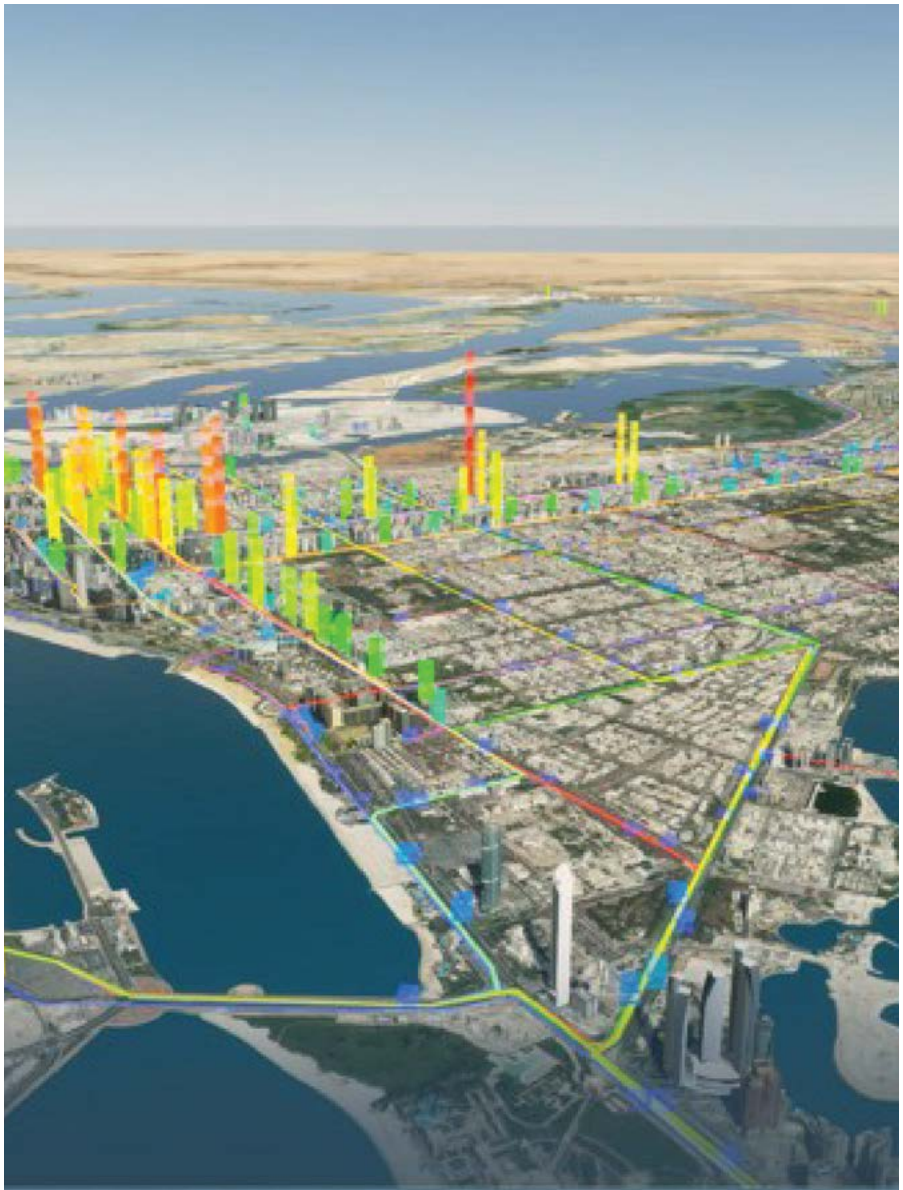
- Topographic Maps
- Photo Maps
- Nautical / Hydrographic Charts
- 2.5D and 3D City Models
- HD Navigation Maps

Core mapping product categories

- UAV's, Aerial and Satellite Imagery
- Optical, SAR, Multispectral and Hyperspectral Imagery
- LiDAR point clouds

Environmental and contextual layers

- Land Use / Land Cover Map
- Vegetation / canopy height models
- Population distribution models
- Vector data (roads, rail, utilities, waterways)



Real-time simulation and monitoring of physical environments

Space42's Digital Twin platform creates dynamic, real-time representations of physical environments, enabling organisations to simulate, predict, and optimise outcomes before actions are taken in the real world.

While GIQ provides intelligence on what is happening, the Digital Twin layer, extends this capability by modelling what could happen next. It integrates continuous data inputs from Space42's ecosystem, including Foresight SAR, multi-source Earth observation, and AI-driven analytics, to create a live, evolving operational environment.

This drives decision making based on real-time context, forward-looking scenarios, and measurable outcomes, enabling more confident planning and execution.

KEY CAPABILITIES

Real-time environment modelling

Creates dynamic, continuously updated representations of physical assets, infrastructure, and environments.

Scenario simulation and forecasting

Enables users to test different scenarios, assess potential outcomes, and evaluate risks before decisions are implemented.

Scalable deployment across sectors

Supports applications across government, infrastructure, mobility, and enterprise environments.

Cross-system integration

Connects with Space42 platforms and external systems, ensuring simulations reflect real operational conditions.

Data-driven decision support

Integrates geospatial insights, AI outputs, and operational data into a unified decision environment.

INTEGRATED **SYSTEMS**

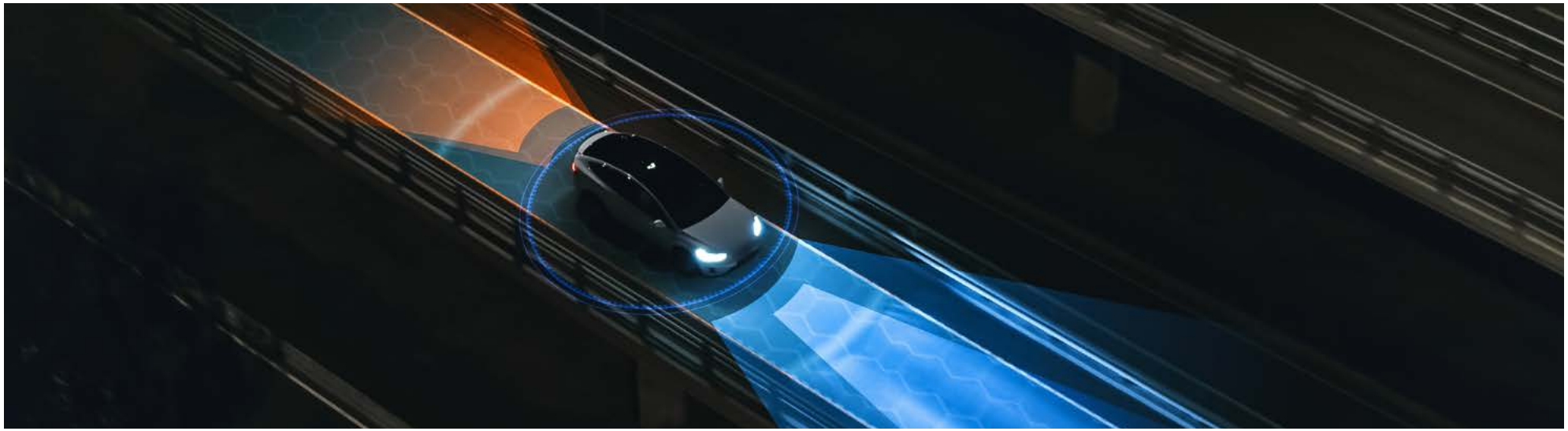
Combining connectivity, observation and intelligence into **autonomous mobility offering**

AUTONOMOUS **MOBILITY**

Intelligent mobility systems built on data, AI, and autonomous platforms

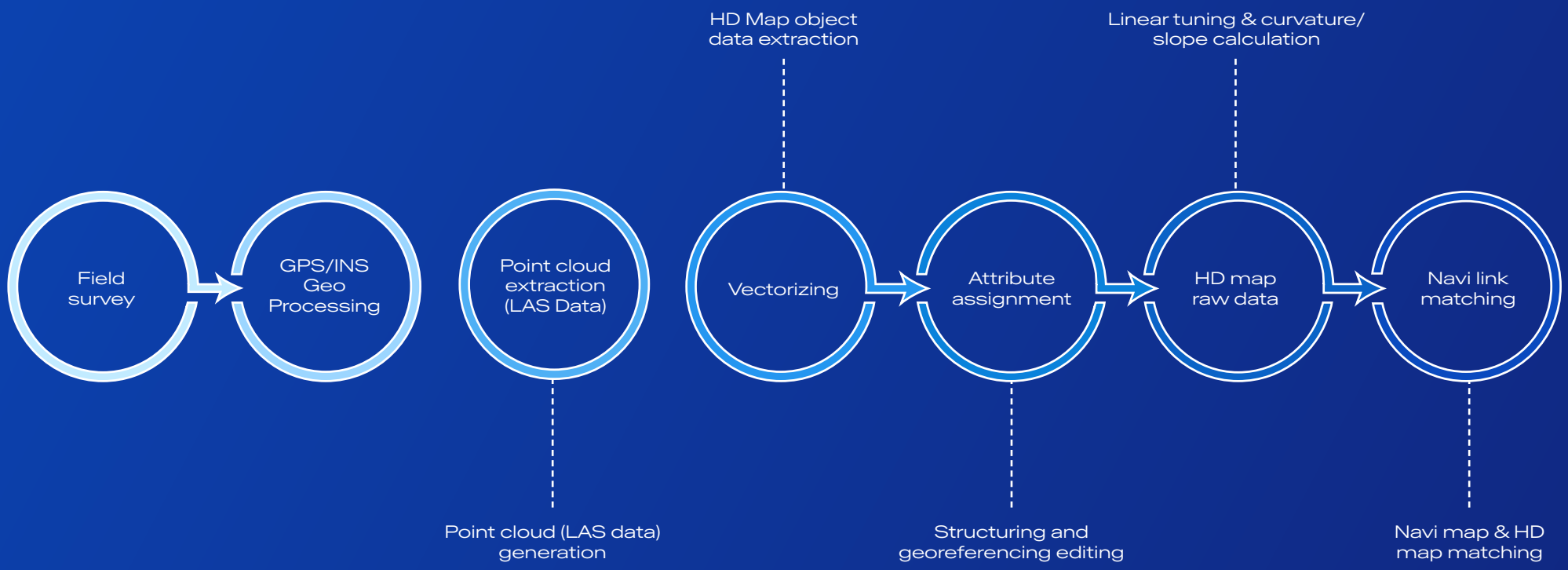
Autonomous mobility represents the convergence of AI, geospatial data and analytics, real-time connectivity, and advanced vehicle systems. Space42 brings these capabilities together to enable safer, more efficient transport systems across cities, industrial zones, logistics corridors, and national infrastructure.

Through the integration of autonomous vehicles, digital twin environments, and centralized command platforms, Space42 enables governments and operators to deploy scalable autonomous mobility ecosystems that improve operational efficiency, enhance safety, and unlock new models of urban mobility.



AUTONOMOUS MOBILITY **PLATFORM**

A full-stack autonomous mobility ecosystem combining vehicles, AI, and digital infrastructure.



RETROFIT-READY
VEHICLE PLATFORMS

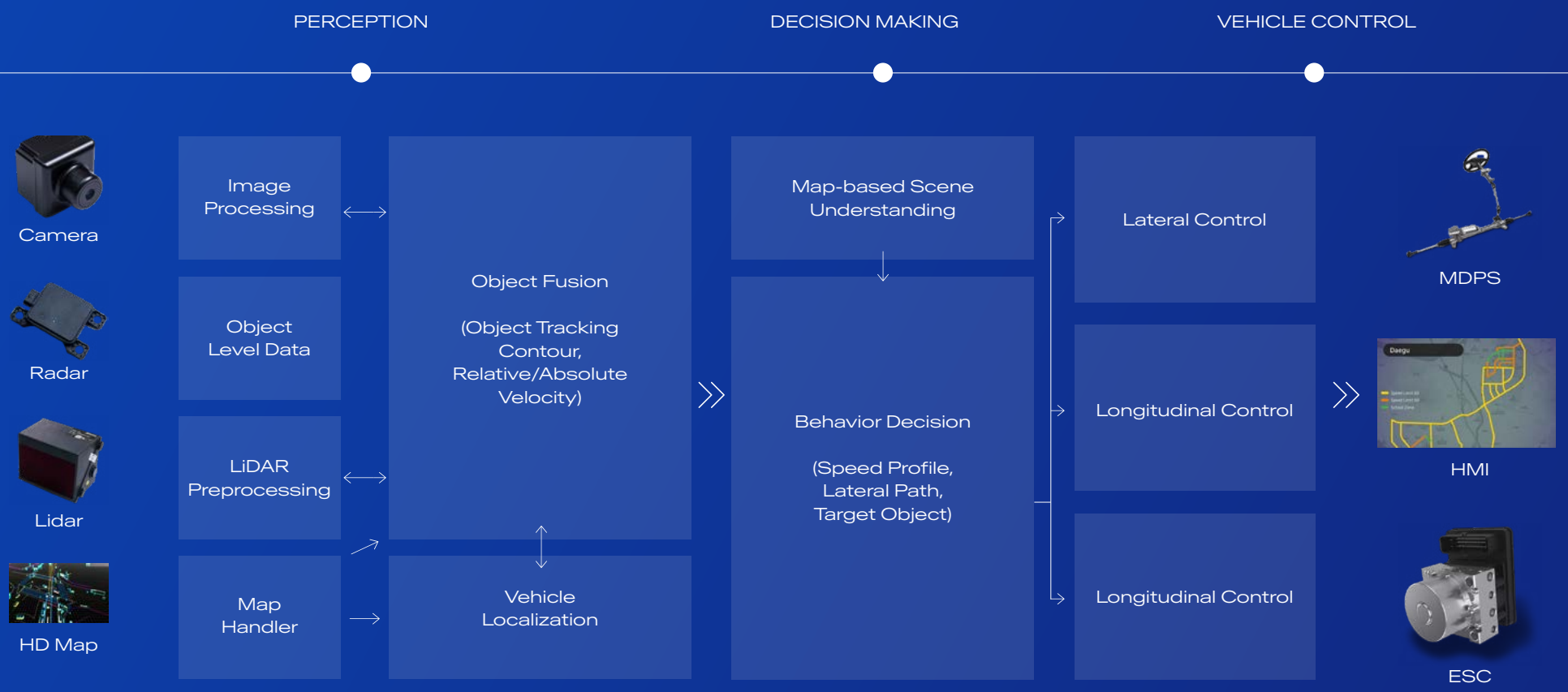
Space42's autonomous driving platform is vehicle-agnostic by design

Enabling integration across a wide range of vehicle types and operational use cases.

Platforms such as the KIA vehicles can be operationalised more efficiently due to prior system validation and integration.

RETROFIT-FIRST **DEPLOYMENT MODEL**

The platform enables existing vehicle fleets to be upgraded with autonomous capabilities. This approach allows governments and operators to introduce autonomy without major infrastructure or vehicle replacement programmes, reducing deployment costs while accelerating adoption.



TECHNOLOGY **FOUNDATIONS**

Sensor fusion for environmental awareness

Autonomous vehicles rely on a multi-sensor perception system that combines LiDAR, radar, and AI vision technologies to understand complex environments in real time.

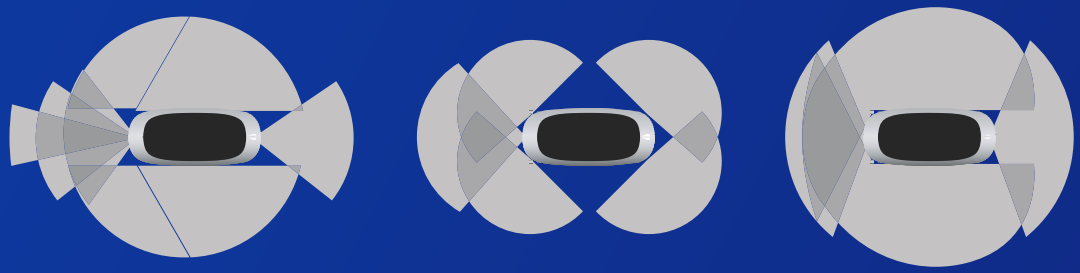
Sensor configuration includes:

Radar
- Long-range detection up to 174 metres
- Corner radar coverage up to 60 metres

LiDAR
- Multi-channel LiDAR sensors
- Detection up to 300 metres
- 360° environmental scanning

AI camera system
- Eight high-resolution cameras
- Resolution 1920 × 1536
- Multi-angle field-of-view detection

Together these sensors enable 360° situational awareness, allowing vehicles to detect, track, and respond to dynamic road environments.

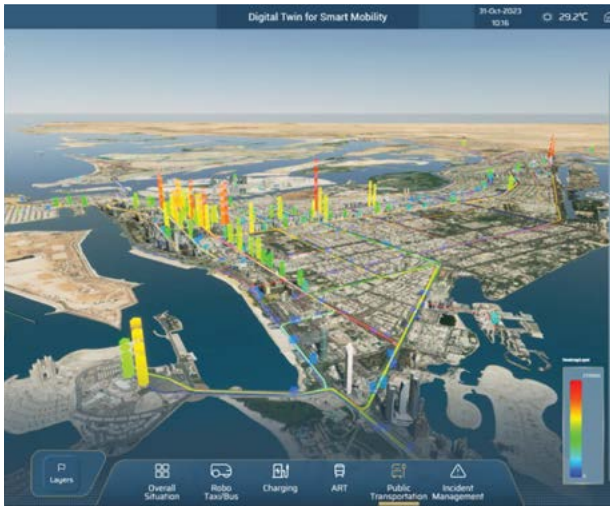


Camera
A2Z view 8ea
1920x1536 | 30°, 60° 110°

Radar
(Long 1ea, Corner 4ea)
174m, ±10° | 60m, ±45°

LiDAR
40Ch 2ea, 32Ch 2ea
32CH: 300m, 135°
32Ch: 200m, 360°

FLEET OPERATIONS **AND CONTROL**



Digital Twin integration

Space42 integrates autonomous mobility systems with digital twin environments, enabling operators to simulate traffic conditions, optimize routes, and test mobility strategies before deployment. Digital twin environments provide:

- Real-time traffic simulation
- Infrastructure modelling
- Predictive mobility analytics
- System performance monitoring

This capability enables cities and operators to design data-driven mobility ecosystems that adapt in real time.

Autonomous Mobility control center

The platform includes a centralized operations systems, allowing operators to monitor and manage autonomous fleets in real time.

Capabilities include:

- Real-time vehicle monitoring
- Route planning and fleet coordination
- Incident response and safety supervision
- Operational analytics

ENLIGHTEN THE EARTH

FROM SPACE


SPACE42
space42.ai